2006–2007

Saskatchewan

Provincial Budget

Performance Plan

Saskatchewan Watershed Authority

2007-00017

Minister's Message

It is my pleasure to present the performance plan for the Saskatchewan Watershed Authority for 2006-07 and beyond.

Safe and secure water supplies for Saskatchewan depend upon effective action to manage and protect our source waters. The Saskatchewan Watershed Authority has been tasked by our government to ensure the protection of source water quality and quantity.

Since 2003, the Authority has been leading citizen-centred watershed and aquifer planning processes in seven key areas of the province. During the coming fiscal year, that process will continue to bear fruit with the finalization of comprehensive plans for the Assiniboine, Lower Souris and Moose Jaw watersheds and the Yorkton aquifer.

The Authority has also led a process of public and stakeholder consultation on water conservation during 2005. A comprehensive Water Conservation Plan for Saskatchewan will be released in the coming months.

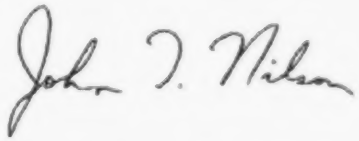
Near the end of the 2005-06 fiscal year, the Authority released a State of the Watershed Reporting Framework, to establish the processes for consolidating and analyzing watershed health data from a variety of federal, provincial and non-governmental agencies. The first State of the Watershed Report will be released during the 2006-07 fiscal year.

While these bold initiatives are impressive, no less important is the day to day work of managing, maintaining and enhancing our water control infrastructure throughout the province. Last year's June floods demonstrated the importance of Gardiner Dam and other structures, not only in managing water supply, but in protecting homes and lives. During 2006-07, the Authority will continue to ensure the long-term sustainability of our infrastructure.

The Authority is a knowledge-based organization. Work will continue to expand our knowledge of Saskatchewan's ground water. Likewise, the Authority will continue to promote water education through programs such as Project WET (Water Education for Teachers).

Nearly seven per cent of Canada's fresh water is in Saskatchewan. That is nearly 1.5 per cent of all the fresh water in the world. The Saskatchewan Watershed Authority will work with all Saskatchewan citizens, with residential, agricultural, industrial and recreational users, with First Nations and Métis communities, with local governments and with stewardship groups to protect this precious resource today, and for generations to come.

I am committed to completing the key actions identified in our performance plan and reporting on the Authority's progress to the people of Saskatchewan in the 2006–07 annual report.



John T. Nilson, Q.C.
Minister Responsible for the
Saskatchewan Watershed Authority

Who We Are

The Saskatchewan Watershed Authority was established in October 2002 as part of the Safe Drinking Water Strategy with a mandate to protect and manage Saskatchewan's water supplies. This mandate makes the Saskatchewan Watershed Authority responsible for:

- sustainable allocation of ground and surface water;
- inventory, analysis and monitoring of water resources;
- flood forecasting; and
- administration and control of water infrastructure including such major structures as Gardiner Dam.

The Watershed Authority's mandate recognizes that good source water is a product of a healthy ecosystem. The Watershed Authority:

- leads watershed and aquifer planning;
- develops partnerships and projects that help provide healthy watersheds;
- provides assessment and monitoring practices that ensure the protection and restoration of the province's water sources; and
- co-ordinates the North American Waterfowl Management Plan in Saskatchewan.

The Watershed Authority works within the framework of Saskatchewan's Safe Drinking Water Strategy. The Performance Plan for the Safe Drinking Water Strategy is available on-line. (http://www.se.gov.sk.ca/environment/protection/water/drinking.asp)

The Watershed Authority currently has 194 employees (187.8 full-time equivalents). The Watershed Authority's head office is located in Moose Jaw, but many services and programs are delivered through its regional offices in Nipawin, Swift Current, Weyburn, North Battleford and Yorkton, and other offices located in Prince Albert, Regina and Saskatoon. You are encouraged to learn more about the Watershed Authority and its programs by visiting the Watershed Authority's website. (www.swa.ca)

The Watershed Authority's work is focused on three main areas:

PROTECTING WATERSHEDS

Watershed and aquifer planning is underway in seven areas of the province aimed at protecting source water. The first plans will be completed early in 2006. The Watershed Authority's stewardship and extension programs assist landowners to improve watershed health through restoration of riparian areas, protection of wetlands and grasslands, and encouragement of management practices which support fish and wildlife and protect water sources.

Assessing the health of watersheds is an essential aspect of source water protection. The Watershed Authority works with Saskatchewan Environment to monitor water quality. The Watershed Authority will consider comments on its recently released framework for State of Watershed Reporting, revise the indicators where necessary and publish the first State of the Watershed Report during the fiscal year.

Public support and participation is essential to the protection of source water. The Watershed Authority therefore works with partners in the Safe Drinking Water Strategy to deliver education and information programs to create awareness and understanding of water and watershed issues.

MANAGING WATER SUPPLIES

The Watershed Authority provides hydrology expertise to determine surface water supplies, guide allocations, forecast floods and direct operation of water control structures such as dams. Water levels and flows are monitored by the Authority at more than 200 sites in the province. All major water allocations including municipal, industrial, irrigation, and intensive livestock uses must be approved by the Watershed Authority. The Watershed Authority also represents Saskatchewan on trans-boundary water issues.

Much of Saskatchewan depends on groundwater. To protect this resource, the Watershed Authority licenses all but domestic users to ensure water uses are sustainable and new development does not impact existing users. The Watershed Authority also conducts research to determine groundwater supplies and provides information to citizens and industry to help locate groundwater sources. A network of wells is monitored to determine trends in groundwater levels.

The Watershed Authority handles formal and informal complaints about drainage causing damage and may make and enforce orders for remedies, such as ditch blocks.

SASKATCHEWAN'S WATER MANAGEMENT INFRASTRUCTURE

To manage surface water supplies, the Watershed Authority maintains and operates Provincial water management infrastructure, including 45 dams and 130 kilometres of conveyance channels plus ancillary works. These include Gardiner, Qu'Appelle, Rafferty and Alameda dams. The Watershed Authority invests significantly each year in maintenance, rehabilitation and upgrading of this infrastructure.

The Watershed Authority provides financial support to Conservation and Development Area Authorities and municipalities to assist with maintenance and rehabilitation of locally owned infrastructure.

Plan at a Glance

The Saskatchewan Watershed Authority was created in October 2002. This third publicly released performance plan builds on the progress achieved through the 2005-06 plan. The goals and objectives stated are long-term in nature, which the Watershed Authority will work toward over a number of years. The plan also states the key actions the Watershed Authority will undertake in 2006-07 to further its objectives and will report on these in its 2006-07 Annual Report. A good plan must evolve as circumstances change. The Watershed Authority will review its goals and objectives annually, develop new key actions and work to develop a more complete set of performance measures.

Vision – Excellence in watershed management promoting safe, sustainable water supplies in healthy ecosystems

GOAL 1

Safe and sustainable water supply

***OBJECTIVE 1** – Water management infrastructure is safe and meets operational requirements*

Performance Measures

- Risk ratio for the Province's water management infrastructure
- Number of dams requiring significant upgrades to meet dam safety guidelines

***OBJECTIVE 2** – Water supply is reliable*

Performance Measures

- Number of detailed assessments conducted on water allocations for industrial projects
- Number of 1:250,000 map sheets for which Geographic Information System (GIS) based digital ground water maps have been completed
- Municipal per capita water consumption

***OBJECTIVE 3** – Flood damage is minimized*

Performance Measures

- Number of urban municipalities adopting acceptable flood hazard zoning bylaws
- Per cent of flood susceptibility studies on new subdivisions forwarded to Government Relations within 30 days

GOAL 2

Healthy watersheds and aquifers

***OBJECTIVE 1** – Source waters and watersheds are protected*

Performance Measures

- Number of completed watershed and aquifer plans
- Water Quality Index ratings for lakes
- Water Quality Index ratings for rivers

***OBJECTIVE 2** – Public is aware of the importance of healthy watersheds*

Performance Measure

- Number of teachers attending Project WILD and Project WET workshops

2006-07 Financial Overview

The Saskatchewan Watershed Authority's revenues include grants from the Government of Saskatchewan's General Revenue Fund and Fish and Wildlife Development Fund as well as other revenues comprised of various charges on water use. In 2006-07, the Watershed Authority will receive General Revenue Fund monies as a grant through Saskatchewan Environment of $6.537 million for the following purposes:

	(in thousands of dollars)
Operations	$ 919
Water Control	648
Water Infrastructure Rehabilitation	3,139
Water Quality	1,831

A breakdown of the Watershed Authority's 2006-07 budgeted revenues and expenditures by major area is provided below.

REVENUE	*(in thousands of dollars)*
Government of Saskatchewan	
– General Revenue Fund	$ 6,537
– Fish & Wildlife Development Fund	828
Water Revenue	13,106
Contract Revenue	400
Other	1,916
Total	$ 22,787

EXPENDITURES	*(in thousands of dollars)*
Corporate Services	$ 5,278
Regional Services	3,903
Infrastructure Management	2,272
Water Conservation Plan Implementation	200
Watershed Planning	1,257
Watershed Monitoring and Assessment	1,796
Stewardship Projects and Administration	2,232
Interjurisdictional Water Management and Administration	868
Groundwater Management	837
Hydrology Services	1,316
Interest	18
Depreciation Expense	3,536
Total	$ 23,513
Surplus (Deficit) for the Year	$ (726)
FTE Staff Complement	187.8

The Watershed Authority, in accordance with the Public Sector Accounting Board's standards, capitalizes its assets such as dams, and depreciates them over time. This depreciation is recorded as an expense on its statement of revenue and expenditures. For 2006-07, the Watershed Authority has budgeted infrastructure capital expenditures of $2.574 million and infrastructure related depreciation of $3.3 million. The net impact of the difference between these figures on the budgeted surplus (deficit) is an increased expense of $726 thousand. Therefore, the Watershed Authority's entire budgeted deficit is attributable to the impact of depreciation.

Trends and Issues

The Saskatchewan Watershed Authority used a risk assessment approach to examine the broad issues it faces in fulfilling its mandate. The following discussion of trends and issues is primarily based on that risk assessment. A good risk assessment process requires follow up discussion with internal and external partners and the necessary reassessment. Risks change over time and the Watershed Authority will continue to assess its risks.

CO-MANAGEMENT OF WATER RESOURCES WITH FIRST NATIONS AND MÉTIS

Relationships with First Nations and Métis are evolving and will continue to do so for many years. The relationships can be politically sensitive and are complex, in part because there are many individual First Nations, and because new legal ground is frequently being crossed. Initiatives such as the Meadow Lake Self Government Agreement are important steps forward in evolution of First Nations Governance, but involve significant and complicated discussions with a potential to impact the Province's ability to manage water. Treaty Rights encompass certain elements of water management, such as the right to fish. The Watershed Authority recognizes areas of overlap between Treaty Rights and provincial water management and has developed a community involvement policy to guide consultation with citizens, including First Nations and Métis peoples.

The Watershed Authority is involved in negotiations with First Nations in the Qu'Appelle River Valley around flood claims arising from operation of Prairie Farm Rehabilitation Administration (PFRA) dams. While this is primarily an issue for Canada and the First Nations, Saskatchewan has a strong interest in seeing the issues resolved. Some of the issues raised in negotiations include issues that could be dealt with in co-management agreements and at provincial First Nations co-management committees. The Watershed Authority is working with several First Nations in the Qu'Appelle River Valley to develop co-management agreements and committees. Interim operating agreements have been negotiated allowing operation of the Echo Lake control structure while negotiations continue toward a long-term solution. No agreements have yet been reached on the Round or Crooked Lake control structures.

INCREASED EXPECTATIONS

The Watershed Authority initiated watershed planning as a step in implementing the Safe Drinking Water Strategy. The first three watershed protection plans are expected to be completed during the first three months of 2006 with four more plans to be completed during the following year. Completed watershed plans will be a statement by local communities of steps they want taken to protect their water. This clearly provides an opportunity and support for government to move forward on source water protection. It also creates challenges and stresses in meeting public expectations on plan implementation.

Similarly, the Watershed Authority has completed extensive consultations toward development of a water conservation plan. The consultation has shown significant support for the concept and created an expectation that government will take some water conservation steps. The Watershed Authority will need to co-ordinate plan implementation, undertake education about water conservation and improve its water allocation process to promote water conservation.

DRAINAGE AND WETLAND RETENTION

The Watershed Authority is responsible for regulations which control drainage, primarily to control downstream water impacts. The Watershed Authority uses a model of responding to complaints to deal with downstream effects. Many ditches are constructed without Watershed Authority approval or knowledge.

The Provincial Wetland Policy mandates protection of wetlands, but does not specifically mandate any technique for maintaining wetland abundance and diversity. Public support for wetland protection is strong, but especially among landowners, there is also a very strong interest in protecting the landowner's right to manage his or her own land and therefore, resistance to a regulated approach to wetland protection.

VARIABILITY OF WATER SUPPLIES

Saskatchewan's water supply has significant variation from years of significant flood risk, as observed in 2005, to periods of drought. Climate change may increase the risk of experiencing both extremes; however, the long-term effect of climate change on water supply is not clearly understood.

A major drought creates real water supply pressures, especially in some rural areas. In a March 2005 poll (*Saskatchewan Environment – Environmental Issues – Public Opinion Survey*), 47 per cent of respondents identified drought as a significant environmental issue, with concern about this issue being significantly higher in rural areas.

Water demand is expected to continue to increase due to growth in several sectors, including oil and gas, mining, irrigation and livestock production and industries such as food processing. Reliable water supplies are essential for this economic development as well as for the well-being of the citizens.

INFRASTRUCTURE

The Watershed Authority owns, operates and maintains 45 water storage and control facilities as well as conveyance works on the Qu'Appelle and Souris Rivers. Among these are the major structures of the Gardiner and Qu'Appelle dams on the South Saskatchewan River and the Rafferty and Alameda dams in the Souris River basin. The Watershed Authority is also responsible for some control structures along the Qu'Appelle River as well as other water supply and recreation projects throughout Saskatchewan. The current replacement value of the works owned by the Watershed Authority is estimated to be about $1.37 billion. Maintenance and rehabilitation costs for these works will continue to use a significant portion of the Watershed Authority's budget.

Failure of structures not only affects water supply, but creates risks to property and life. In the case of the four high consequence structures, the damage in the event of a major failure would be large.

During 2004-05, the Provincial Auditor completed a review of the Watershed Authority's dam safety program as it applies to the four major dams. The Provincial Auditor made four recommendations:

- that operations, maintenance and surveillance manuals be prepared;
- that Emergency Preparedness Plans be prepared, tested and maintained;
- that outside consultants conduct dam safety reviews on a five-year rotation; and
- that the Watershed Authority establish 5 to 10-year performance targets for rehabilitation work.

INTEGRATED WATER MANAGEMENT FRAMEWORK

Saskatchewan Environment is leading development of the Provincial Green Strategy which will set out the overall provincial environmental agenda. One of the major areas of focus under the Green Strategy will be water. Saskatchewan Environment has asked the Watershed Authority to lead development of an integrated water management framework which will be the guiding document for provincial water management and will include the work currently being done as part of the Safe Drinking Water Strategy.

The concept of integrated water management is increasingly being accepted as the way to approach water issues because it requires consideration of all the many issues around water. An integrated water management framework will be a significant step in meeting commitments under the Provincial Green Strategy related to water. Developing an integrated water management framework will require a significant investment in public consultation, working with other agencies and developing the concept and final strategy in order to achieve a true provincial vision and goals for water management.

Changes from 2005-06 Performance Plan

The goals and objectives included in the Watershed Authority's 2006-07 Performance Plan are unchanged from 2005-06. Three new performance measures have been added to the plan:

- Number of 1:250,000 map sheets for which GIS based digital ground water maps have been completed
- Municipal per capita water consumptic
- Water Quality Index ratings for lakes

In addition, the title of one performance measure has been altered to "Water Quality Index ratings for rivers." It previously referred to watersheds. This title change is clearer in relation to the new lake performance measure as lakes and rivers are both part of watersheds.

These new performance measures increase the reader's ability to assess performance results. The Watershed Authority will continue to develop a suite of performance measures which allows the reader to effectively assess performance.

Goals, Objectives, Actions and Measures

This section provides the detailed 2006-07 Performance Plan for the Watershed Authority. Under each goal, a number of objectives have been established that support progress toward the broader goal statement. For each objective, a set of key actions, the means for making progress toward the objectives, has been identified which the Watershed Authority is committed to completing in 2006-07. Performance measures have been established for each objective, with others under development, to gauge progress toward meeting the objective.

The Watershed Authority budget includes fees for water use including water power rental charges, which are royalties imposed by the Province on hydro electric producers (SaskPower). This revenue stream constitutes approximately one-half of the Watershed Authority's total annual revenues and represents the single largest revenue source within the annual budget. This revenue stream is variable with weather conditions; revenue shortfalls can be expected in dry years and surpluses in wet years. Of a total water power revenue budget of approximately $11 million, fluctuations of up to $3 million could occur in any given year. The Watershed Authority budgets for an average water flow year and, to allow program stability, plans to retain surplus revenue in high water years to cover shortfalls in low flow years.

GOAL 1

Safe and sustainable water supply

***OBJECTIVE 1** – Water management infrastructure is safe and meets operational requirements*

The Watershed Authority operates and maintains 45 water control structures and 130 kilometres of conveyance channels for the Province. These works are an essential part of the Province's water management infrastructure. They control the flow of water to improve water quality, ensure adequate supply, reduce the risk of flood damage, enhance recreational opportunities and maintain aquatic habitat. Four of the dams, Gardiner, Qu'Appelle, Rafferty and Alameda, would have major consequences from downstream flooding, including property damage and risk of loss of life, if they failed. Like all capital assets, these works depreciate and require a continuous investment in maintenance and rehabilitation to ensure their safety and ability to operate to meet the Province's needs.

Key Actions for 2006-07

- Initiate a dam break analysis of the Qu'Appelle River Dam.
- Rehabilitate infrastructure, including Lac La Ronge Water Control Structure, Blackstrap North Dam, and Lac La Plonge Water Control Structure, to ensure they are safe and operational.
- Commission a dam safety review of Alameda Dam.
- Install a fish way at Lac La Ronge Water Control Structure.

What are we measuring?	**Where are we starting from?**
Risk ratio for the Province's water management infrastructure	0.141 *[2004-05]*

This measure is a ratio of the aggregated assessed risk of all the Watershed Authority's water management infrastructure at a given time, compared to the maximum possible risk generated by this infrastructure. Risk, defined as the likelihood of a failure multiplied by the consequences of a failure, has been assessed in relative values. Numerically, this may be expressed as:

$$\text{Risk Ratio} = \frac{\sum \text{Assessed Current Risk}}{\sum \text{Total Possible Risk}}$$

This measure gauges the Watershed Authority's progress in upgrading its infrastructure to acceptable standards and quantifies the overall risk of the water management infrastructure. A lower ratio indicates safer infrastructure, with a ratio of zero indicating no current assessed risk. As the Watershed Authority owns the structures, its influence on this measure is high, but upgrades to reduce risk require significant investments and will therefore be made over a number of years.

What are we measuring?	Where are we starting from?
Number of dams requiring significant upgrades to meet dam safety standards	27 *[2004-05]*

This measure quantifies the number of provincial dams which require upgrades to meet the Canada Dam Association Dam Safety Guidelines. The Watershed Authority has a high level of influence over this measure.

***OBJECTIVE 2** – Water supply is reliable*

The Province has a long history of allocating supplies for domestic, municipal, industrial, irrigation and other purposes that remove water from the source water bodies. A prime objective, in controlling water use, is to ensure needs are met and a new user does not take water already depended on by another person or business. Instream use of water is also important to the health of aquatic ecosystems.

Operation of provincial projects, such as the Watershed Authority's major dams and SaskPower's hydro operations, requires careful planning to achieve project objectives and minimize negative impacts on other uses of the resource. Reliable and extensive data are essential to the forecasting required for operation planning.

There is a consensus among most climatologists that the Earth's temperature is rising, leading to effects on other meteorological elements such as rain and snow, wind and the frequency of severe storms. These changes will impact on the Province's water supply.

The current performance measures examine aspects of the work needed to manage demand for water and help citizens find reliable water supplies. They do not yet provide an overall evaluation of success in ensuring a reliable water supply. The Watershed Authority is examining options for additional performance measures related to reliability of allocations and intends to bring additional performance measures forward in the next performance plan.

Key Actions for 2006-07

- Lead implementation of the Water Conservation Plan.
- Initiate revisions to the Watershed Authority's water allocation policies.
- Initiate a program to improve water data including developing a strategy for collecting water use data from a wider range of users of surface and ground water, including detailed assessments of actual water use by some users.
- Participate in negotiations with the federal government and Qu'Appelle Valley First Nations to resolve flood claims.
- Negotiate an agreement with Environment Canada to guide Piping Plover management at Lake Diefenbaker to mitigate losses caused by reservoir operations.

- Review and revise operating plans for an additional five of the 45 Watershed Authority owned structures, including public consultation where necessary.
- Improve ability to forecast flows on northern rivers by installing and operating four new hydrometric stations in the Churchill and Tazin River Basins.

What are we measuring?	Where are we starting from?
Number of detailed assessments conducted on water allocations for industrial projects	0 *[2004-05]*

The Watershed Authority allocates water to industrial projects and imposes conditions such as reporting of water use, limits when water can be withdrawn, term of licence and no transfer of licence without prior approval of the Watershed Authority. The Watershed Authority began conducting detailed assessments of industrial projects to determine actual water use and to determine if water use conditions imposed by the Watershed Authority are appropriate or should be modified. In the first half of 2005-06, thirteen assessments had been completed.

The assessments will determine the need for the Watershed Authority to modify existing licences and whether or not to consider adding new conditions to future licences. The Watershed Authority has a high level of influence over this measure.

What are we measuring?	Where are we starting from?
Number of 1:250,000 map sheets for which GIS based ground water maps have been completed	0 *[2005]*

The Watershed Authority, in partnership with the Saskatchewan Research Council, has previously completed a series of maps which illustrate the location, extent, and depth of potential aquifers throughout 19 map sheets in southern Saskatchewan. In 2005, the Watershed Authority initiated a program to further refine knowledge of ground water with a new series of Geographic Information System based maps for 21 map sheets and to make these maps available on the Watershed Authority website. Ground water maps are very important to help communities, industry and other water users understand the potential and best areas to obtain a sustainable supply of ground water. This indicator tracks progress in completing this mapping. Maps are based on National Topographic Survey (NTS) map sheets at a scale of 1:250,000.

What are we measuring?	Where are we starting from?
Municipal per capita water consumption	437 litres per person per day *[2004]*

This measure deals with total annual urban water use (in-home, business and municipal irrigation) within communities. The annual consumption is affected by summer irrigation demands which vary between wet and dry years causing the performance measure to vary between years. However, because the goal of water conservation is to become more efficient in all water uses, this is a good measure of water conservation in the urban setting. The Watershed Authority does not have direct control over this measure, but through water conservation programs does influence the measure.

This measure is computed by summing the annual water consumption for each community from the Saskatchewan Community Water Use Records maintained by the Watershed Authority, and dividing by the total population and 365 (days).

The Watershed Authority will work over the next year to provide an additional measure which will have less variability to provide a measure of success in reducing in-home and business water use. This will allow a true measure of in-home water conservation targets while better defining municipal irrigation rates as a long-term trend.

***OBJECTIVE 3** – Flood damage is minimized*

Floods can impose significant costs in property damage and loss of production. The Watershed Authority works to minimize flood damage through the use of water management infrastructure and by predicting areas at risk of flooding to guide other departments, municipalities and business in reducing flood risk. Dams, dykes and ditches can reduce the size and duration of floods while proper management of development in flood plains avoids the large costs in property damage which could otherwise occur in a major flood.

The Watershed Authority has developed two performance measures for this objective, but both show progress on only small portions of the overall flood damage issue. The Watershed Authority is working to find additional, reliable final outcome measures. Finding good measures is challenging because flooding is a rare event, and therefore, fluctuates significantly from year to year.

Key Actions for 2006-07

- Complete and test Emergency Preparedness Plans for Rafferty and Alameda Dams.
- Complete the Flood Damage Reduction Program mapping for Weyburn, Prince Albert and Swift Current and revise the mapping for Saskatoon.
- Review the Flood Damage Reduction Program and develop a standard for auditing flood plain development in communities.
- Provide technical and financial support to Conservation and Development Area Authorities and Watershed Associations to maintain/rehabilitate locally owned existing water control infrastructure.
- Complete implementation of the new drainage complaint process and deal with complaints resulting from the high precipitation in 2005, resolving as many as possible through informal processes.

What are we measuring?	**Where are we starting from?**
Number of urban municipalities adopting acceptable flood hazard zoning bylaws	16 *[2004-05]*

This measure quantifies the number of urban municipalities adopting acceptable flood hazard zoning bylaws. Flood damages are largely, though not exclusively, associated with urban development in flood-prone areas; therefore, one of the most effective ways of minimizing flood damage costs is by preventing inappropriate development in these areas. Given this decision is made by each municipality, the results for this measure will largely be out of the control of the Watershed Authority; however, the Authority can influence this measure by providing information on flood risk.

What are we measuring?	**Where are we starting from?**
Per cent of flood susceptibility studies on new subdivisions forwarded to Government Relations within 30 days	34% of 119 subdivision reviews *[2004-05]*

Under *The Planning and Development Act, 1983,* Government Relations asks the Watershed Authority to review proposed subdivisions to determine flood risk to the property. The assessment and comments are forwarded to Government Relations for their evaluation of the proposed subdivisions. The proportion of flood susceptibility studies of proposed subdivisions completed and returned to Government Relations within 30 days of receipt is being measured.

The determination of flood risk and susceptibility is key to minimization of flood damages. If the proposed subdivision of land is susceptible to flooding, new development in the flood plain can be prevented or restricted to minimize flood damages. The Watershed Authority has a significant level of influence over the measurement results.

GOAL 2

Healthy watersheds and aquifers

***OBJECTIVE 1** – Source waters and watersheds are protected*

The people of Saskatchewan depend on both surface and groundwater sources for their basic human needs and to generate economic activity. Proper siting of a water supply and aggressively protecting it from potential contaminants are keys to providing a safe water supply.

It is recognized that a multiple barrier approach protecting from the source to the tap is the most effective way of protecting drinking water quality. Controls to provide multi-barrier protection to source waters are being developed and put into place.

Key Actions for 2006-07

- In follow up to the Green Strategy Water Stewardship Forum, initiate co-operative development of an Integrated Water Management Framework with federal and provincial departments and consult with First Nations and stakeholders.
- Facilitate work of local planning committees to complete source water protection plans for the Assiniboine, Lower Souris, North Saskatchewan, South Saskatchewan and Upper Qu'Appelle River watersheds and co-ordinate development of the provincial responses to these plans.
- Assist designated watershed groups with implementation of watershed plans and annually report progress.
- Prepare and publish a State of the Watershed Report.
- Complete wetlands and drainage policy.
- Work with partners to prepare a strategic plan for North American Waterfowl Management Plan programs in the Prairie Habitat Joint Venture.
- Increase the awareness of the relationships between agricultural activities, source water protection and ecological function through extension activities and development of Beneficial Management Practices with a minimum of 300 producers.
- Undertake an assessment to determine the contribution of non-point agricultural sources to water quality and habitat degradation that can be used in the watershed planning activities and to measure the efficacy of Best Management Practices.

What are we measuring?

Number of completed watershed and aquifer plans

Where are we starting from?

Zero plans completed, seven plans under development

[October 2005]

Watershed and aquifer plans guide activities for source water protection. Watershed planning allows Saskatchewan residents the opportunity to commit to and participate in changes that will ensure adequate and quality drinking water. The completed plans will set priorities and identify emerging issues.

There are 29 watersheds in Saskatchewan. The Watershed Authority leads the planning process, but community representatives develop the plans. The Watershed Authority thus shares influence on this measure with the communities in the watersheds.

What are we measuring?

Water Quality Index ratings for lakes

Where are we starting from?

Waterbody	Year	Water	Quality Index
Jackfish Lake	2004	56.4	Marginal
Murray Lake	2004	67.6	Fair
Good Spirit Lake	2004	83.9	Good

The Water Quality Index is an overall measure of the quality of water for specific uses such as the protection of aquatic life, livestock watering, recreation, etc. The levels of chemicals and organisms in the samples are compared with the Water Quality Index levels for safety and health of the people. The Index is a composite measure of different chemicals and organisms in the water and whether the water quality is safe for particular uses. It is a good measure of the quality of surface or groundwater.

The Government has limited direct control over the results of this broad measure of water quality. While government regulates point source pollution, many human and natural factors can influence water quality.

What are we measuring?	Where are we starting from?
Water Quality Index ratings for rivers	*Excellent* Churchill River *Good to Excellent* Assiniboine River, Beaver River, North Saskatchewan, South Saskatchewan, Saskatchewan River Basin *Fair to Good* Qu'Appelle River*, Souris River *Poor to Fair* Moose Jaw River** *[2002]*

* *There are two locations in the Qu'Appelle Basin where the quality would be considered marginal for protection of aquatic life. The basin ranges from fair to excellent for livestock watering and irrigation purposes.*

** *Water quality concerns along the Moose Jaw River stem from nutrients and suspended solids from man-made sources (wastewater discharge and agricultural activities) and natural variation (flow, run-off and snow melt).*

OBJECTIVE 2 *– Public is aware of the importance of healthy watersheds*

Many actions to protect water can only be accomplished at the initiative of or in partnership with the citizens of the Province. Success of the Watershed Authority's programs is therefore dependent on public understanding of the importance and benefits of source water protection.

The current performance measure only examines school-based educational programs which, while important, are only one aspect of creating public awareness. The Watershed Authority will conduct attitudinal polling and examine this data for a possible broader performance measure.

Key Actions for 2006-07

- Use marketing and communications to support the watershed and aquifer planning processes and plan implementation.
- Develop public information on water conservation initiatives.
- Initiate public opinion research to measure public attitudes toward source water protection.
- Complete development of a native prairie teacher activity guide, linked to the Saskatchewan curriculum, by completing material for Grades 3 to 6 and making it available on the Watershed Authority's website.

What are we measuring?	Where are we starting from?
Number of teachers attending Project WET and Project WILD workshops annually	269 Project WET 418 Project WILD *[June 2005]*

The Watershed Authority uses two school-based programs, Project WET and Project WILD, as its major programs to educate school children about water and aquatic ecosystems. Both are made available to teachers through workshops, which train teachers in the use of material and at which material is provided. The performance measure is the number of teachers attending full day certification and part-day refresher Project WILD and Project WET workshops. This statistic is easily tracked and relates directly to actual use of Watershed Authority education materials in the classroom. The Watershed Authority has moderate influence over the measure through its work arranging workshops and marketing the program, although participation is up to individual teachers and schools.

For More Information

This plan sets out what the Watershed Authority hopes to accomplish in the coming year. If you have questions or comments, or would like additional copies of the plan, please call the Watershed Authority's head office in Moose Jaw at 306-694-3900 or the Provincial Water Inquiry Line toll free at 1-866-SASK-H2O (1-866-727-5420) or e-mail the Watershed Authority at comm@swa.ca. Written comments should be addressed to:

Saskatchewan Watershed Authority
111 Fairford Street East
Moose Jaw, Saskatchewan
S6H 7X9

You are also invited to visit the Watershed Authority's website, www.swa.ca. At this site, you will find:

- this performance plan;
- news releases;
- information on watershed planning;
- information on water conservation planning;
- flood advisories;
- provincial stream flow forecasts;
- information on ground water;
- information on the dams and reservoirs operated by the Watershed Authority; and
- Watershed Authority publications.